IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of:	§	Attorney Docket No. 10055
Michael L. Reed, et al.	§	
	§	Customer No. 26890
Serial No. 10/002,795	§	
	§	Group Art Unit: 2162
Filed: November 15, 2001	§	
	§	Examiner: Alam, Shahid Al
For: Compressing Data Stored in a	§	
Database System	§	Confirmation Number: 5289

BRIEF ON APPEAL

      This Brief is submitted in connection with an appeal for which a Notice of Appeal was filed 24 October 2008, from the final rejection of the Examiner dated 24 June 2008 finally rejecting claims 1-37.

      The Director is hereby authorized to charge any deficiency fees in association with this communication to Deposit Account No. 50-4370.

REAL PARTY IN INTEREST

The real party in interest is Teradata Corporation, a corporation having a principal place of business at 2835 Miami Village Drive, Miamisburg, OH 45342, the United States of America.

RELATED APPEALS AND INTERFERENCES

There are no related appeals and no related interferences regarding the above-identified patent application.

STATUS OF CLAIMS

Claims 1-37 are pending and stand finally rejected. Claims 1-37 are on appeal here and are set forth in the Claims Appendix attached hereto.

STATUS OF AMENDMENTS

No amendments were made to any of claims 1-37 after the Final Office Action was filed 24 June 2008.

SUMMARY OF CLAIMED SUBJECT MATTER

An embodiment, as set forth in independent claim 1, relates to a process for use in a database system, comprising storing data according to a first user-defined data type in a table (Page 4, Paragraph 17, Lines 1-2; Page 5, Paragraph 23, Lines 4-5; Page 8, Paragraph 36, Lines 1-5; Figure 3, elements 202, 204, 206, and 208; Page 8, Paragraph 40, Lines 1-2), associating at least a first compression routine with the first user-defined data type (Page 5, Paragraph 24, Lines 2-5; Page 5, Paragraph 25, Lines 1-2; Page 6, Paragraph 26, Lines 1-2; Page 6, Paragraph 28, Lines 1-4; Page 7, Paragraph 30, Lines 4-5; Page 8, Paragraph 40, Lines 2-3), and using the first compression routine to compress the data according to the first user-defined data type (Page 5, Paragraph 24, Lines 3-5; Page 6, Paragraph 26, Lines 4-6; Page 9, Paragraph 40, Lines 1-3).

Another embodiment, as set forth in independent claim 13, relates to an article comprising at least one storage medium containing instructions that when executed cause a system to (Page 10, Paragraphs 45-46) store data according to a first user-defined data type in a database system (Page 4, Paragraph 17, Lines 1-2; Page 5, Paragraph 23, Lines 4-5; Page 8, Paragraph 36, Lines 1-5; Figure 3, elements 202, 204, 206, and 208; Page 8, Paragraph 40, Lines 1-2), and associate a first compression routine with the first user-defined data type for compressing the data (Page 5, Paragraph 24, Lines 2-5; Page 5, Paragraph 25, Lines 1-2; Page 6, Paragraph 26, Lines 1-2; Page 6, Paragraph 28, Lines 1-4; Page 7, Paragraph 30, Lines 4-5; Page 8, Paragraph 40, Lines 2-3).

Another embodiment, as set forth in independent claim 27, relates to a database system (Page 3, Paragraph 14, Lines 1-2), comprising a storage system to store at least a table (Page 4, Paragraph 20, Lines 4-8; Figure 1, element 24; Page 5, Paragraph 21, Lines 1-6), a plurality of compression routines to apply respective different compression algorithms (Page 5, Paragraph 24, Lines 4-5; Page 5, Paragraph 25, Lines 1-4; Page 6, Paragraph 26, Lines 1-11; Page 6, Paragraph 28, Lines 1-8; Page 7, Paragraph 35, Lines 2-4; Page 8, Paragraph 37, Lines 1-9; page 8, Paragraph 38, Lines 4-7), and a controller adapted to invoke one of plurality of compression routines to compress data stored in the table (Page 6, Paragraph 26, Lines 4-6; Page 8, Paragraph 40, Lines 1-2; Figure 4, elements 306 and 308; Page 9, Paragraph 40, Lines 1-2; Page 9, Paragraph 42, Line 4 - Paragraph 43, Line 8).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

I.   Claims 1-37 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,781,773 to Vanderpool et al. ("Vanderpool").

ARGUMENT

Rejections Under 35 U.S.C. § 102(b) Over Vanderpool

The first issue for the Board's consideration is whether claims 1-12 are unpatentable under 35 U.S.C. § 102(b) over Vanderpool.

For purposes of this appeal, claims 2-12 stand or fall together with claim 1 in view of the rejection of claim 1 under 35 U.S.C. § 102(b) over Vanderpool.

As detailed below, the Appellants believe that Vanderpool is insufficient to anticipate claim 1. More specifically, it is the Appellants' belief that Vanderpool fails to teach every element of claim 1.

Claims 1-12

The Appellants traverse the rejection of these claims on the grounds that Vanderpool does not teach every element of claim 1. It is well settled that, in order to reject a patent under 35 U.S.C. §102(b), the reference must teach every claim element. The PTO provides in MPEP § 2131 that

> *"[t]o anticipate a claim, the reference must teach every element of the claim...."*

Claim 1 recites the following:

> 1. A process for use in a database system, comprising:
>   storing data according to a first user-defined data type in a table;
>   associating at least a first compression routine with the first user-defined data type; and
>   using the first compression routine to compress the data according to the first user-defined data type.

Contrary to the Examiner's position that all elements are disclosed in the Vanderpool reference, Vanderpool does not disclose a process that includes "storing data according to a first user-defined data type in a table," "associating at least a first compression routine with the first user-defined data type" or "using the first compression routine to compress the data according to the first user-defined data type."

With regard to the claim 1 limitation of "storing data according to a first user-defined data type in a table", the Examiner cited the following passages of Vanderpool as allegedly disclosing such a feature:

> The method for search and display of data using a computer with an optical media read apparatus for communication with the computer includes providing a database stored on optical media which is accessible utilizing the…

Vanderpool, Column 2, Lines 51-54.

> …interface allows a user to define a search query for a search parameter corresponding to one of the searchable data fields.

Vanderpool, Column 3, Lines 1-2.

Appellants respectfully disagree. Here, Vanderpool generally describes searching of data in a database stored on media and an interface that allows a user to define a query. Vanderpool is wholly silent with regard to storage of data **according to a user-defined data type**. For at least this reason, Vanderpool is insufficient to anticipate claim 1, and withdrawal of the rejection of claim 1 is thus requested.

Further, with regard to storing data according to a first "user-defined data type," the Examiner stated the following:

> Vanderpool teaches…storing data…according to a first user-defined data type in a table (each interface allows a user to define a search query for a search parameter corresponding to one of the searchable data fields…

Final Office Action dated 24 June 2008, Page 3.

Here, the Examiner apparently has alleged that a user query comprises a user-defined data type. Appellants respectfully disagree.

As recognized by the PTO:

2111.01 Plain Meaning (in part)

I. THE WORDS OF A CLAIM MUST BE GIVEN THEIR "PLAIN MEANING" UNLESS SUCH MEANING IS INCONSISTENT WITH THE SPECIFICATION

Although claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1369, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004) (The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation >in light of the specification<.). This means that the words of the claim must be given their plain meaning unless **>the plain meaning is inconsistent with< the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (discussed below);

Chef America, Inc. v. Lamb-Weston, Inc., 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004)…

Appellants submit the interpretation of a query as a user-defined data type is clearly inconsistent with the plain meaning of the term "user-defined data type". As is understood by those skilled in the art, and as described in the subject application (See, for example, Page 1, Paragraph 4; Page 3, Paragraph 15), a user-defined data type comprises a non-predefined data type that may be created by a user or application. The assertion of a query as comprising a user-defined data type is not within any reasonable interpretation of the term.

With regard to the claim 1 limitation of "associating at least a first compression routine with the first user-defined data type," Appellants note Vanderpool is necessarily precluded from disclosing such a feature because Vanderpool fails to disclose any reference to data stored according to a user-defined data type. For at least this reason, Vanderpool is insufficient to anticipate claim 1, and withdrawal of the rejection of claim 1 is thus requested.

Claims 2-12 depend from, and further limit, independent claim 1. Therefore, the same distinctions between Vanderpool and the claimed invention in claim 1 apply for claims 2-12.

Claims 13-26

The second issue for the Board's consideration is whether claims 13-26 are unpatentable under 35 U.S.C. § 102(b) over Vanderpool.

For purposes of this appeal, claims 14-26 stand or fall together with claim 13 in view of the rejection of claim 13 under 35 U.S.C. § 102(b) over Vanderpool.

As detailed below, the Appellants believe that Vanderpool is insufficient to anticipate claim 13. More specifically, it is the Appellants' belief that Vanderpool fails to teach every element of claim 13.

The Appellants traverse the rejection of these claims on the grounds that Vanderpool does not teach every element of claim 13. It is well settled that, in order to reject a patent under 35 U.S.C. §102(b), the reference must teach every claim element. The PTO provides in MPEP § 2131 that

> *"[t]o anticipate a claim, the reference must teach every element of the claim...."*

Claim 13 recites the following:

> 13. An article comprising at least one storage medium containing instructions that when executed cause a system to:
> store data according to a first user-defined data type in a database system; and
> associate a first compression routine with the first user-defined data type for compressing the data.

Contrary to the Examiner's position that all elements are disclosed in the Vanderpool reference, Vanderpool does not disclose an article comprising a storage medium containing instructions that when executed cause a system to "store data according to a first user-defined data type in a database system" or "associate a first compression routine with the first user-defined data type for compressing the data."

With regard to the claim 13 limitation of an article containing instructions that when executed cause a system to "store data according to a first user-defined data type in a database system", the Examiner cited the following passages of Vanderpool as allegedly disclosing such a feature:

> The method for search and display of data using a computer with an optical media read apparatus for communication with the computer includes providing a database stored on optical media which is accessible utilizing the…

Vanderpool, Column 2, Lines 51-54.

> …interface allows a user to define a search query for a search parameter corresponding to one of the searchable data fields.

Vanderpool, Column 3, Lines 1-2.

Appellants respectfully disagree. Here, Vanderpool generally describes searching of data in a database stored on media and an interface that allows a user to define a query. Vanderpool is wholly silent with regard to storage of data **according to a user-defined data type**. For at least this reason, Vanderpool is insufficient to anticipate claim 13, and withdrawal of the rejection of claim 13 is thus requested.

Further, with regard to the claim term "user-defined data type," the Examiner stated the following:

> Vanderpool teaches…instructions that…store data…according to a first user-defined data type (each interface allows a user to define a search query for a search parameter corresponding to one of the searchable data fields…

Final Office Action dated 24 June 2008, Page 8.

Here, the Examiner apparently has alleged that a user query comprises a user-defined data type. Appellants respectfully disagree.

As recognized by the PTO:

> **2111.01 Plain Meaning (in part)**
>
> **I. THE WORDS OF A CLAIM MUST BE GIVEN THEIR "PLAIN MEANING" UNLESS SUCH MEANING IS INCONSISTENT WITH THE SPECIFICATION**
>
> Although claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1369, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004) (The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation >in light of the specification<.). This means that the words of the claim must be given their plain meaning unless ****>the plain meaning is inconsistent with<** the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (discussed below); *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004)…

Appellants submit the interpretation of a query as a user-defined data type is clearly inconsistent with the plain meaning of the term "user-defined data type". As is understood by those skilled in the art, and as described in the subject application (See, for example, Page 1, Paragraph 4; Page 3, Paragraph 15), a user-defined data type comprises a non-predefined data type that may be created by a user or application. The assertion of a query as comprising a user-defined data type is not within any reasonable interpretation of the term.

With regard to the claim 13 limitation of an article containing instructions that when executed cause a system to "associate a first compression routine with the first user-defined data type for compressing the data," the Appellants note Vanderpool is necessarily precluded from disclosing such a feature because Vanderpool fails to disclose any reference to data stored according to a user-defined data type. For at least this reason, Vanderpool is insufficient to anticipate claim 13, and withdrawal of the rejection of claim 13 is thus requested.

Claims 14-26 depend from, and further limit, independent claim 13. Therefore, the same distinctions between Vanderpool and the claimed invention in claim 13 apply for claims 14-26.

Claims 27-37

The third issue for the Board's consideration is whether claims 27-37 are unpatentable under 35 U.S.C. § 102(b) over Vanderpool.

For purposes of this appeal, claims 28-37 stand or fall together with claim 27 in view of the rejection of claim 27 under 35 U.S.C. § 102(b) over Vanderpool.

As detailed below, the Appellants believe that Vanderpool is insufficient to anticipate claim 27. More specifically, it is the Appellants' belief that Vanderpool fails to teach every element of claim 27.

The Appellants traverse the rejection of these claims on the grounds that Vanderpool does not teach every element of claim 27. It is well settled that, in order to reject a patent under 35 U.S.C. §102(b), the reference must teach every claim element. The PTO provides in MPEP § 2131 that

> *"[t]o anticipate a claim, the reference must teach every element of the claim...."*

Claim 27 recites the following:

> 27. A database system, comprising:
>   a storage system to store at least a table;
>   a plurality of compression routines to apply respective different compression algorithms; and
>   a controller adapted to invoke one of plurality of compression routines to compress data stored in the table.

Contrary to the Examiner's position that all elements are disclosed in the Vanderpool reference, Vanderpool does not disclose a system that includes "a plurality of compression routines to apply respective different compression algorithms," or "a controller adapted to invoke one of plurality of compression routines to compress data stored in the table."

With regard to the claim 27 limitation of "a plurality of compression routines to apply respective different compression algorithms," the Examiner cited the following passage of Vanderpool as allegedly disclosing such a feature:

> ...database engine, the user search and display software, decompression software for both decompressing the main image in accordance with the JPEG standard and the thumbnail image in accordance with **the compression algorithm**, and other user interface software such as that necessary for permitting use of mouse 128 and display controls 132.

Vanderpool, Column 9, Lines 19-23 (**Emphasis Added**).

Here, Vanderpool only describes a single compression algorithm and thus clearly fails to disclose a plurality of compression routines to apply respective different compression algorithms. For at least the reasons described above, Vanderpool fails to anticipate claim 27 and withdrawal of the rejection of claims 27 is respectfully requested.

With regard to the claim 27 limitation of "a controller adapted to invoke one of plurality of compression routines to compress data stored in the table," Appellants note Vanderpool is necessarily precluded from disclosing such a feature because Vanderpool fails to disclose a plurality of compression routines as discussed above. For at least this reason, Vanderpool is insufficient to anticipate claim 27, and withdrawal of the rejection of claim 27 is thus requested.

Claims 28-37 depend from, and further limit, independent claim 27. Therefore, the same distinctions between Vanderpool and the claimed invention in claim 27 apply for claims 28-37.

Conclusion

For all of the foregoing reasons, it is respectfully submitted that claims 1-37 be allowed. A prompt notice to that effect is respectfully requested.

Respectfully submitted,

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CLAIMS APPENDIX

1. A process for use in a database system, comprising:

storing data according to a first user-defined data type in a table;

associating at least a first compression routine with the first user-defined data type; and

using the first compression routine to compress the data according to the first user-defined data type.

2. The process of claim 1, further comprising using a second compression routine to compress the data to improve compression efficiency.

3. The process of claim 2, wherein using the first and second compression routines comprises using user-defined data type methods.

4. The process of claim 3, wherein using the user-defined data type methods comprises using methods built in with the first user-defined data type.

5. The process of claim 1, wherein using the first compression routine comprises using a first compression method built in with the first user-defined data type.

6. The process of claim 5, further comprising providing a user-defined method executable to invoke the first compression method.

7. The process of claim 6, further comprising invoking the user-defined method to invoke a second compression method built in with the first user-defined data type.

8. The process of claim 7, wherein invoking the user-defined method comprises invoking the user-defined method to alter compression efficiency.

9. The process of claim 1, further comprising providing a second user-defined data type built upon the first user-defined data type.

10. The process of claim 9, further comprising storing a first type of data using the first user-defined data type and storing a second type of data using the second user-defined data type.

11. The process of claim 10, further comprising using a second compression routine to compress the second type of data.

12. The process of claim 9, further comprising inheriting at least a data structure and at least a built-in method from the first user-defined data type into the second user-defined data type.

13. An article comprising at least one storage medium containing instructions that when executed cause a system to:

store data according to a first user-defined data type in a database system; and

associate a first compression routine with the first user-defined data type for compressing the data.

14. The article of claim 13, wherein the instructions when executed cause the system to associate a second compression routine with the first user-defined data type, the first and second compression routines providing different compression algorithms.

15. The article of claim 14, wherein the instructions when executed cause the system to provide the first compression routine as a method built in with the first user-defined data type.

16. The article of claim 15, wherein the instructions when executed cause the system to provide the second compression routine as a method built in with the first user-defined data type.

17. The article of claim 13, wherein the instructions when executed cause the system to associated a first data structure with the first user-defined data type, the first data structure to indicate a type of compression applied on a data object.

18. The article of claim 17, wherein the instructions when executed cause the system to associate a second data structure with the first user-defined data type, the second data structure to indicate a percentage amount of compression of the data object.

19. The article of claim 18, wherein the instructions when executed cause the system to access the first and second data structures of the data object when accessing the data object.

20. The article of claim 19, wherein the instructions when executed cause the system to store the data object in a relational table.

21. The article of claim 19, wherein the instructions when executed cause the system to store the data object in a relational table distributed across multiple access modules.

22. The article of claim 20, wherein the instructions when executed cause the system to provide a second user-defined data type built upon the first user-defined data type.

23. The article of claim 13, wherein the instructions when executed cause the system to provide a second user-defined data type built upon the first user-defined data type.

24. The article of claim 23, wherein the instructions when executed cause the system to inherit the first compression routine from the first user-defined data type into the second user-defined data type.

25. The article of claim 24, wherein the instructions when executed cause the system to:

associate a second compression routine with the first user-defined data type; and

inherit the second compression routine from the first user-defined data type into the second user-defined data type.

26. The article of claim 25, wherein the instructions when executed cause the system to:

store a first type of data using the first user-defined data type; and

store a second type of data using the second user-defined data type.

27. A database system, comprising:

a storage system to store at least a table;

a plurality of compression routines to apply respective different compression algorithms; and

a controller adapted to invoke one of plurality of compression routines to compress data stored in the table.

28. The database system of claim 27, wherein the table includes a relational table and the data is stored in a first attribute of the relational table.

29. The database system of claim 28, wherein the first attribute is according to a first user-defined data type.

30. The database system of claim 29, wherein the plurality of compression routines are methods built in with the first user-defined data type.

31. The database system of claim 30, the storage system to store a second table having a second attribute according to a second user-defined data type built upon the first user-defined data type.

32. The database system of claim 27, wherein the controller is adapted to invoke another one of the compression routines to alter compression of the data.

33. The database system of claim 32, wherein the controller is adapted to invoke another one of the compression routines in response to a Structured Query Language UPDATE statement.

34. The database system of claim 33, wherein the controller comprises a user-defined method.

35. The database system of claim 34, wherein the plurality of compression routines comprise methods built in with the first user-defined data type,
    the user-defined method executable to invoke the methods built in with the first user-defined data type.

36. The database system of claim 27, further comprising a plurality of access modules adapted to manage access to respective portions of the storage system.

37. The database system of claim 36, wherein the table is distributed across multiple access modules.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.